

## REMARKS

Reconsideration and withdrawal of the rejections set forth in the above-mentioned Official Action in view of the foregoing amendments and the following remarks are respectfully requested.

Claims 1, 3-7 and 9-13 are pending in this application, with Claims 1, 10 and 11 being independent. Claim 13 was previously withdrawn from consideration. Claim 2 has been cancelled without prejudice. Claim 1 is amended herein to incorporate the features of Claim 2. Claim 13 has also been amended. Applicant submits that no new matter has been added.

Claims 1-7 and 9-12 were rejected under 35 U.S.C. § 103(a) as allegedly obvious over U.S. Patent No. 6,203,899 (Hirose et al.) in view of EP 1 048 480 A1 (EP '480). These rejections are respectfully traversed.

Applicant's invention as recited in independent Claim 1, as amended, is directed to an ink-jet recording medium having at least a light-reflecting layer and a dye-fixing layer formed in this order on a base material in a multilayer structure. The light-reflecting layer contains two or more pigments different in chemical composition. The average particle size of a pigment (A) having a highest liquid absorbency in the pigments is smaller than the average particle size of a pigment (B) having a lowest liquid absorbency in the pigments. The pigment (A) has an average particle size of not larger than 1  $\mu\text{m}$ , and the pigment (B) has an average particle size ranging from 0.5  $\mu\text{m}$  to 10  $\mu\text{m}$ . The dye-fixing layer includes not less than 70 mass percent alumina hydrate particles.

Applicant's invention as recited in independent Claim 10 is directed to an ink-jet recording medium having at least a light-reflecting layer and a dye-fixing layer formed in this

order on a base material in a multilayer structure. The light-reflecting layer contains an aluminum pigment and barium sulfate. The average particle size of the aluminum pigment is smaller than the average particle size of the barium sulfate, and the surface of the dye-fixing layer has a 20°-glossiness of not less than 20%. The dye-fixing layer includes not less than 70 mass percent alumina hydrate particles.

Applicant's invention as recited in independent Claim 11 is directed to an ink-jet recording medium having at least a light-reflecting layer and a dye-reflecting layer formed in this order on a base material in a multilayer structure. The light-reflecting layer contains an aluminum pigment and a silica pigment. The average particle size of the aluminum pigment is smaller than the average particle size of the silica pigment, and the surface of the dye-fixing layer has a 20°-glossiness of not less than 20%.

Applicant submits that none of the cited references teach or suggest important features of the present invention.

Hirose et al. is directed to a printing medium including a liquid-absorbent base material, an ink-receiving layer provided on the base material, and comprising a pigment, a binder and a cationic substance, and a surface layer composed principally of cationic ultrafine particles as inorganic particles. Hirose et al. discloses many pigments, including silica and alumina, and discloses that the pigments may be used singly or in any combination. As the Examiner recognizes, however, Hirose et al. does not disclose the claimed relationship between the pigment particles and does not disclose use of barium sulfate.

The Examiner suggests that the particle sizes of pigments are optimizable as they directly affect the opacity of the light reflecting layer. Thus, the Examiner suggests that it is

obvious to modify the particle sizes of a composition in Hirose et al. through routine experimentation and that such experimentation would result in Applicant's invention. Applicant respectfully disagrees.

Without conceding the propriety of the Examiner's suggestion, Applicant submits that optimization of the particle sizes of the pigments disclosed in Hirose et al., would not result in pigments having the relationship of the presently claimed invention. Applicant notes that the relationship between the pigments as presently claimed involves more than just particle size. Not only is the average particle diameter of one pigment larger than the average particle diameter of another, but the ink absorbancy of the particle with the smaller average particle diameter is larger than the ink absorbancy of the particle with the larger average particle diameter. Applicant submits that there is no teaching or suggestion in Hirose et al. of using at least two different pigment particles wherein the average particle diameter of one of the pigment particles is larger than the average particle diameter of another. Furthermore, Applicant submits that Hirose et al. does not recognize the problem to be solved by the present invention. Accordingly, Applicant submits that there is no motivation in Hirose et al. to choose pigments based on their average particle diameter and their ink absorbing properties. Routine experimentation, therefore, would not result in pigments having the relationship of the presently claimed invention.

EP '480 was cited for its teaching of barium sulfate in an underlayer of a recording medium. The Examiner suggests that it would have been obvious for one of ordinary skill to in the art to include barium sulfate in the ink receiving layer of Hirose et al. to improve color density and provide good resistance to wiping. Applicant, however, submits that there is no explicit teaching in EP '480 that the barium sulfate itself improves color density and provides

good resistance to wiping. Moreover, as the Examiner recognizes, EP '480 does not disclose the claimed relationship between the pigment particles. Thus, Applicant submits that not only does EP '480 not remedy the above-noted deficiencies of Hirose et al., but that the Examiner is merely picking and choosing features from each of Hirose et al. and EP '480. That is, the combination is based on impermissible hindsight.

Therefore, Applicant submits that none of the cited references whether taken alone or in combination (assuming such a combination is proper) teaches or suggests important features of Applicant's claimed invention. Accordingly, Applicant respectfully requests reconsideration and withdrawal of the rejection under 35 U.S.C. § 103.

Applicant submits that the present invention is patentably defined by independent Claims 1, 10 and 11. Dependent Claims 3-7, 9 and 12 are also allowable, in their own right, for defining features of the present invention in addition to those recited in independent Claims 1, 10 and 11. Individual consideration of the dependent claims is requested.

This Amendment After Final Rejection is an earnest attempt to advance prosecution and reduce the number of issues, and is believed to clearly place this application in condition for allowance. Applicant notes that the issues raised by the above-noted Office Action are not new. This Amendment, however, was not earlier presented because Applicant earnestly believed that the prior Amendment placed the subject application in condition for allowance. Accordingly, entry of this Amendment under 37 CFR 1.116 is respectfully requested.

Applicant submits that the present application is in condition for allowance. Favorable reconsideration, withdrawal of the objections and rejections set forth in the

above-noted Office Action, rejoinder of withdrawn Claim 13, and an early Notice of Allowability are requested.

Applicant's undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Mark A. Williamson', written over a horizontal line.

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